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THE STATE OF ARIZONA
GAME AND FISH DEPARTMENT
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Sept with 5 Attachments
Add'l to reference material. March 2004 draft

May 2003 Economic Imp. Analysis
Economic Imp. of Fishing Activity
2001 Nat. Survey of Fishing, Hunting & Wildlife-Assoc. Recreation
Feb. 2003 Responsive Management

March 8, 2004

Mr. Steve Spangle
Field Supervisor
U.S. Fish and Wildlife Service
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951

Re: Preliminary Information on the Proposal to Designate Southwestern Willow Flycatcher Critical Habitat

Dear Mr. Spangle:

The Arizona Game and Fish Department (Department) reviewed the Federal Register Notice (Notice) regarding the proposed re-designation of critical habitat for the Southwestern willow flycatcher. As explained in the Notice, the 10th Circuit Court of Appeals set aside the 1997 critical habitat designation and required the U.S. Fish and Wildlife Service (Service) to issue critical habitat consistent with the court ruling. As a result, the Service is requesting information on seven issues related to the scope of the designation and to identify issues related to the evaluation of environmental impacts associated with critical habitat designation.

The Department identified potential willow flycatcher habitat values at specific areas throughout Arizona. However, the fact that we identify biological value within a specific area should not be construed as the Department's support for designating such areas as critical habitat. Rather, we are merely stating whether these areas have the primary constituent elements required for the Service when determining designation of critical habitat under the Endangered Species Act. The Department's specific comments regarding the Notice are included as an attachment to this letter.

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As you know, the Department has been working with the Service in developing critical habitat recommendations for various species in Arizona. We look forward to this continued collaboration throughout the development and implementation of recommendations for critical habitat designation for the Southwestern willow flycatcher and other species. As identified in the Department's letter to the Service, we will continue to coordinate closely with your staff as this process moves forward.

Please contact Bob Broscheid, Habitat Branch Chief, at (602) 789-3605 if you have any questions regarding this letter.

Sincerely,

Duane L. Shroufe
Director

DLS:BB:cep

cc: Bob Broscheid, Chief, Habitat Branch
Terry Johnson, Chief, Nongame Branch
Regional Supervisors, AGFD

Attachment

Document: USFWS SWWF Critical Habitat adn NEPA Comments 3.1.04.doc

6-021 R1

Attachment

Arizona Game and Fish Department Information Concerning
Designation of Southwestern Willow Flycatcher Critical Habitat

March 5, 2004

Issues related to the scope of the designation.

The Department's comments follow the outline in the Federal Register Notice [69(13): 2940-2943].

1) **Published or unpublished information establishing the physical and biological features essential to the conservation of the flycatcher.**

- Below we provide a list of publications that describe habitat requirements of the flycatcher. This list is not intended to be exhaustive; rather it includes a portion of data published since 1997 that the Department considers relevant to flycatcher habitat affinities in Arizona.
  - Allison, L.J. C.E. Paradzick, J.W. Rourke, and T.D. McCarthey. 2003. A characterization of vegetation in nesting and non-nesting plots for southwestern willow flycatchers in central Arizona. Studies in Avian Biology 26:81-90.
  - Dockens, P.E.T. and C.E. Paradzick, *editors*. (*In review*). Mapping and Monitoring Southwestern Willow Flycatcher Breeding Habitat in Arizona: a Remote Sensing Approach. Nongame and Endangered Wildlife Technical Report 223. Arizona Game and Fish Department, Phoenix, Arizona.
  - Hatten and Paradzick. 2003. A multiscaled model of southwestern willow flycatcher breeding habitat. Conservation Biology 67: 774-788.
  - McKernan, R.L. and G. Braden. 2002. Status, distribution, and habitat affinities of the southwestern willow flycatcher along the lower Colorado River. Year 6-2001. San Bernardino County Museum, Redlands, California.
  - Paradzick, C.E. and A.A. Woodward. 2003. Distribution, abundance, and habitat characteristics of southwestern willow flycatchers (*Empidonax traillii extimus*) in Arizona, 1993-2000. Studies in Avian Biology 26:22-29.

PL2

2) **Historically or currently occupied areas that may contain the physical and biological features essential to the conservation of the flycatcher and may require special management considerations.**

- Recent publications describing historically or currently occupied habitat in Arizona include:
  - Paradzick, C.E. and A.A. Woodward. 2003. Distribution, abundance, and habitat characteristics of southwestern willow flycatchers (*Empidonax traillii extimus*) in Arizona, 1993-2000. Studies in Avian Biology 26:22-29.

PL3

- Smith, A.B., A.A. Woodward, P.E.T. Dockens, J.S. Martin, T.D. McCarthey. 2003. Southwestern willow flycatcher 2002 survey and monitoring report. Nongame and Endangered Wildlife Program Technical Report 210. Arizona Game and Fish Department, Phoenix, Arizona.
- Smith, A.B., C.E. Paradzick, A.A. Woodward, P.E.T. Dockens, T.D. McCarthey. 2002. Southwestern willow flycatcher 2001 survey and monitoring report. Nongame and Endangered Wildlife Program Technical Report 191. Arizona Game and Fish Department, Phoenix, Arizona.
- Smith, A.B., P.E.T. Dockens, A.A. Tudor, H.C. English, and B.L. Allen. 2004. Southwestern willow flycatcher 2003 survey and nest monitoring report. Nongame and Endangered Wildlife Program Technical Report 233. Arizona Game and Fish Department, Phoenix, Arizona.

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- Enclosed with these comments is a draft copy of Dockens and Paradzick (*in review*). We will provide you a final version when it is printed (expected completion and printing March 30, 2004). The Service should have copies of the other reports identified above on file. If you need copies of any report, please contact us.
- See 4 below, which describes special management considerations for specific areas.

3) A detailed description of essential (or nonessential) flycatcher areas.

- See Map 1. Areas to consider for designation:
  - Upper Big Sandy River
    - Upstream on Trout Creek (T18N, R13W, S14) downstream on the Big Sandy River to the confluence with the Groom Spring Wash (T13N, R13W, S9-10).
  - Lower Gila River
    - Upstream from confluence with Colorado River to T8S, R17W, S12.
  - Verde River – Upstream of Horseshoe Lake
    - Sob Canyon (T17N, R3E, S29) to upstream boundary of Horseshoe Lake Conservation pool.
  - Tonto Creek – Upstream of Roosevelt Lake
    - Gisela (T9N, R11E, S19 and T9N, R10E, S24) to the upstream boundary of the new conservation pool of Roosevelt Lake
  - Salt River - Upstream of Roosevelt Lake
    - Confluence with Cherry Creek (T4N, R15E, S23) to upstream boundary of new conservation pool of Roosevelt Lake.
  - Pinto Creek
    - Confluence with Salt River upstream to and including 1 mile upstream on Haunted Canyon (T1N, R13E, S26).

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- Note: the Department will provide additional information at the March 8-10 meeting concerning Pinto Creek.

- Middle Gila River
  - Dripping Springs Wash (T4S, R16E, S14) downstream to the Ashurst-Hayden Diversion Dam near Cochran.

- Middle/Lower San Pedro River
  - The Narrows (north of Benson) downstream to the Gila River confluence.

- Gila River – Safford
  - The upstream side of Earven Flat (T5S, R28E, S29) downstream to the San Carlos Reservation eastern boundary.

- Gila River – Duncan
  - The New Mexico Border downstream to Guthrie (border between T5S, R30E, S2 and S4).

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- Santa Cruz River – Tubac
  - Rio Rico downstream to Aqua Linda (T20S, R12E, S19).

- Greer Area Streams – Little Colorado River
  - Little Colorado River (South Fork): from the confluence with the Little Colorado River (T8N, R28E, S17) to Joe Baca Draw (T8N, R28E, S34)
  - Little Colorado River (East Fork): from the confluence with the West Fork of the Little Colorado River (T7N, R27E, S14) to Forest Service Road 113 (T6N, R27E, S4).
  - Little Colorado River (West Fork): from the diversion ditch at T8N, R28E, S16, upstream to Forest Road 113 (T7N, R27E, S33).

- Alpine – San Francisco River
  - San Francisco River from Forest Service Road 249 near headwaters (T6N, R30E, S33 and T5N, R30E, S4) downstream to Luna Lake (T5N, R31E, S17).

- Nutrioso Creek
  - Confluence with Riggs Creek (T7N, R30E, S17) downstream to Correjo Crossing (T8N, R30E, S17).

4) Published or unpublished information on why identified areas are important (or no longer important) for flycatcher conservation and whether or not the areas are currently occupied by the species.

- Information for areas to consider for designation (identified in #3 above):
  - Upper Big Sandy River
    - A relatively large flycatcher population was documented intermittently along this reach from 1994-2003.
  - Lower Gila River
    - Resident (1996) and migratory flycatchers have been documented on this river reach and the basic floodplain characteristics for suitable habitat exist. Historic records indicate that the riparian area near Yuma once contained a large flycatcher population. With management that favors retaining and creating new riparian habitat, the area will continue to be important for the species conservation and recovery.
  - Verde River – Upstream of Horseshoe Lake
    - Numerous occupied sites have been documented along this portion of the Verde River since 1993. Many areas along the reach have floodplain characteristics that may allow suitable habitat to occur.
  - Tonto Creek – Upstream of Roosevelt Lake
    - Two migrant flycatchers were detected 0.5 km north of A-Cross road on Tonto Creek in 2001. In 2003, two nesting pairs were detected near Bar-X Road. A migrant flycatcher was also detected in 2003 on Tonto Creek just downstream of the confluence with Rye Creek.
  - Pinto Creek
    - This area is adjacent to the Salt River inlet to Roosevelt Lake and could serve as refuge and breeding habitat when lake levels are high. Recent GIS-based modeling by the Department (Dockens and Paradzick 2004), and field surveys by A. Smith (Nongame Branch) indicate that potentially suitable habitat may exist along this reach.
    - Note: the Department will provide additional information at the March 8-10 meeting concerning habitat along Pinto Creek.
  - Middle Gila River
    - Resident flycatchers have been documented in the portion of the reach between Dripping Springs and Kelvin between 1994-2002. This river reach contains one of the largest willow flycatcher populations in Arizona, and flycatcher movement has been documented between sites on the lower San Pedro River. Because the Lower San Pedro River has been identified in a number of Section 7 and Section 10 Consultations as

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mitigation/conservation habitat (i.e., Roosevelt Lake BO, SRP HCP), and these breeding sites are connected, maintaining suitable breeding habitat and the ecological conditions necessary to create and sustain suitable habitat on the Gila River may be as important to the birds survival and recovery as habitat on the lower San Pedro River.

- Lower portions of the reach (Kelvin-Ashurst-Hayden Dam) contain potentially suitable habitat and could be important as migration, dispersal, or future breeding habitat.

- Middle/Lower San Pedro River
  - This river reach contains one of the largest flycatcher populations in Arizona, and a number of sites have been acquired as mitigation/conservation habitat (i.e., Roosevelt Lake BO, SRP HCP). Smith et al. (2004) recently documented the movement of flycatchers in the upstream direction, suggesting that protection of unoccupied but suitable habitat, and the ecological process that create and sustain suitable breeding habitat along the entire reach should be protected.

- Gila River – Safford
  - Resident flycatchers have been consistently documented in this river reach between 1995-2003. The reach provides the floodplain characteristics for suitable flycatcher habitat and includes not only occupied, but potential habitat for recovery (Dockens and Paradzick *in review*).

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- Gila River – Duncan
  - Resident flycatchers have been documented in this river reach between 1998-2002. This river reach provides the floodplain characteristics for suitable flycatcher habitat and includes not only occupied, but potential habitat for recovery.

- Santa Cruz River – Tubac
  - Although resident flycatchers have not been documented in this river reach during recent surveys, occasional late migrants, including a June 25 record, have been detected. This reach contains potentially suitable habitat in an area of the state with few existing flycatchers.

- Greer Area Streams- Little Colorado River
  - Little Colorado River (South Fork): Resident flycatchers were not documented on this river reach from 1993-1994, but were found here, historically. Surveys have not been conducted at this site since 1994; therefore it is unknown whether habitat is occupied. This river reach contains some of the last remaining suitable habitat at high elevations in Arizona.

- Little Colorado River (East Fork): Although, resident flycatchers have never been documented on this river reach, the basic floodplain characteristics for suitable habitat exist.
- Little Colorado River (West Fork): Resident flycatchers have been documented on this river reach from 1993-2003. It is the one of the few high elevation breeding sites for the flycatcher in Arizona.

- Alpine- San Francisco River
  - Resident flycatchers have been documented in this river reach between 1993-2003. It is the one of the few remaining high elevation breeding sites (Alpine Horse Pasture) for the flycatcher in Arizona.

- Nutrioso Creek
  - A resident flycatcher was documented on this river reach in 1994 (Nelson Reservoir). This area contains some of the last remaining suitable habitat at high elevations in Arizona.

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5) Any draft or final management plans, habitat conservation agreements that provide a conservation benefit to the flycatcher.

The Department supports the Service's efforts to evaluate management/conservation plans and other agreements that provide special management consideration for Southwestern willow flycatchers during the process of developing the proposal for critical habitat. We support the development of proactive management plans and conservation agreements, and we believe a locally driven, community-based approach will ensure that the needs of special status species and other stakeholders will be considered and addressed.

- Areas with flycatchers that are currently managed for riparian values that would benefit, conserve, and aid in recovery of the flycatcher (see Map 1).
- The Department recommends that the areas listed below not be considered for inclusion in the critical habitat designation because of existing management plans that protect the bird and its habitat.
  - Colorado River – Grand Canyon
    - Resident flycatchers have been documented on this portion of the river (River miles 20-71.5) between 1993-2003. It is the only section of the middle Grand Canyon where flycatcher still nest each year. In addition, there are sections in this reach that have been previously occupied.
    - The Area is managed by the National Park Service preserving ecological integrity and protecting occupied habitat.

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  - Colorado River – Lake Mead
    - Resident flycatchers have been documented in this river reach (River mile 246-Lake Mead Delta) between 1993-2001.
    - The National Park Service, Grand Canyon National Park, manages the portion of the river upstream of Lake Mead Delta. The National Park

Service also manages the portion of the river delta downstream of the Grand Canyon National Park Boundary within the Lake Mead National Recreation Area. Riparian habitat within the delta has been addressed in a Biological Opinion.

- Alamo Lake and Lower Bill Williams River
  - Resident flycatchers have been documented in this area between 1996-2003. This site has extensive amounts of suitable habitat and a relatively large population of flycatchers, and thus has the potential to act as a source population for other sites in the area.
  - The Bill Williams River Corridor Steering Committee, which includes personnel from the Department, U.S. Fish and Wildlife Service, U.S. Bureau of Reclamation, U.S. Bureau of Land Management, Army Corps of Engineers, U.S. Geological Service, and the Nature Conservancy provides input to the Corps of Engineers on the operation of Alamo Dam.
  - The Steering Committee makes recommendations for management of Alamo Lake and dam operations, considering both upstream and downstream habitat and fish and wildlife values, including restoration of cottonwood-willow communities. Flycatcher habitat requirements are considered as part of the Steering Committee's adaptive management strategy.
  - Impacts to flycatcher habitat within the full pool area at Alamo Lake have been considered in a Biological Opinion on operation of Alamo Dam. The situation is thus similar to habitat within the pool at Lake Mead and Roosevelt Lake.
  - Additionally, the Lower Bill Williams River occupied habitat occurs on a U.S. Fish and Wildlife Refuge and is protected.

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- Colorado River – mainstem
  - Flycatchers have been reported nesting at numerous locations along the Colorado River downstream of Lake Mead.
  - The Lower Colorado River Multi-Species Conservation Program addresses, conserves, and restores where appropriate riparian habitat for the flycatcher.

- Gila/Salt River - Phoenix
  - One nesting flycatcher was documented in this area in 2001.
  - Multiple restoration projects (e.g., Tres Rios, Rio Salado) are underway to protect existing and establish new riparian vegetation that could benefit flycatchers.

- Verde River –Horseshoe Lake
  - Flycatchers have recently been documented nesting within the conservation pool and downstream of Horseshoe Lake.

- The Salt River Project (SRP) and the Service, with input from the Department, are working towards a Habitat Conservation Plan that addresses flycatcher habitat requirements and conservation.

o Roosevelt Lake – Tonto and Salt Inflows
  - These areas together contain 1/3 of the known flycatcher breeding population in the state.
  - Potential impacts to occupied habitat due to dam operations by the U.S. Bureau of Reclamation are addressed in a Biological Opinion, and SRP's potential impacts are addressed in a Habitat Conservation Plan.

o Cienega Creek
  - A small number of nesting flycatchers were documented in 2001 and 2003 along the creek.
  - The occupied habitat is within the Las Cienegas National Conservation Area managed by the U.S. Bureau of Land Management (BLM) to protect riparian habitat integrity.

o San Pedro River – Conservation Area
  - A small number of flycatchers have been detected in 1996 and 1997 along the upper San Pedro River, within or adjacent to the Conservation Area.
  - The riparian habitat is managed by the BLM to protect riparian ecological integrity and function.

o Hassayampa River (not shown on map)
  - A small number of flycatchers have been documented nesting at the Hassayampa River Preserve almost every year between 1997 – 2003.
  - The site is managed by the Nature Conservancy, which protects riparian habitat.

6) What the lateral extent of critical habitat should be from a stream or other water course.

- Critical habitat should encompass the physical and biological environment necessary for flycatcher conservation and recovery.
- Recent flycatcher habitat research in Arizona suggests the birds are associated with dense patches of young (5-15 cm diameter) trees (C.E. Paradzick, pers comm.). These size/age classes of trees are often found in arcuate bands adjacent to the active river channel (Stromberg 1993). However, Hatten and Paradzick (2003) found that riparian forest and floodplain conditions outside of this narrow band were important to bird habitat selection, and may be crucial for conservation.
- Hydrologic regimes and fluvial geomorphic processes are prime determinants of riparian plant community composition and structure. The river systems containing occupied habitat in Arizona (low elevation streams) are often described as having a compound channel: an active low flow channel, surrounded by slightly higher elevation channels that convey water during floods. Based on the results of Hatten and Paradzick (2003),

these side channels and associated habitats may play a crucial role in flycatcher breeding habitat selection.

- Hydro-geomorphic processes influence flycatcher habitat both laterally and longitudinally along the floodplain. Periodic flooding scours and removes vegetation, transports sediment, alters bed and bank form and channel location, and deposits alluvium. This processes allows pioneer tree species (cottonwood, willow, and tamarisk), the trees most frequently used by flycatchers as nesting habitat, to establish. Additionally, alteration of the environment within the floodplain (e.g., changes to groundwater depths, vegetation community, floodplain sediment, channel form) could alter this process up- and down stream and laterally across the floodplain. Therefore, to conserve the ecological mechanisms that create and sustain flycatcher habitat, a wider area outside of the active and overflow channels should be protected. While managers often use the term 100-year floodplain to denote the area that would encompass this process, in many willow flycatcher occupied habitats a qualified hydrologist has rarely designated its lateral extent. Therefore, it is difficult for the public and managers to clearly identify this area on the ground.

- The Department recommends using the 100-year floodplain as a description of the area designated critical habitat, but for those river reaches where this area would be unknown to the public or managers, we suggest also providing a generalized description of the lateral extent using hydrology, soil, topography, and vegetation. The descriptions could be area specific. Experts in these fields could assist the Service in this effort.

Issues related to the evaluation of environmental impacts (NEPA)

1) Impacts to other endangered or threatened species.

- Designation may benefit other federally listed, proposed, or petitioned riparian obligate species in Arizona though protection of the ecosystem processes that create and sustain riparian habitat. However, designation of critical habitat for Southwestern willow flycatcher may be redundant and provide no additive conservation values in areas where critical habitat has been previously designated. Furthermore, we have concerns about the designation, role and additive value of Critical Habitat. In many cases, we believe that designation of Critical Habitat does not contribute to the overall conservation of threatened and endangered species that are already protected through compliance and consultation requirements under Section 7 of ESA. In these cases, the Department supports development of regional conservation plans that are locally driven, community-based, and seek to address the needs of the species of concern while also addressing the needs of local citizens, local governments and other stakeholders.

2) Any other potential or socioeconomic effects

- The Department suggests that the Service evaluate potential economic impacts (both positive and negative) on consumptive and non-consumptive wildlife activities (e.g.,

wildlife viewing, bird watching, wildlife photography), and recreational sport fishing opportunities.

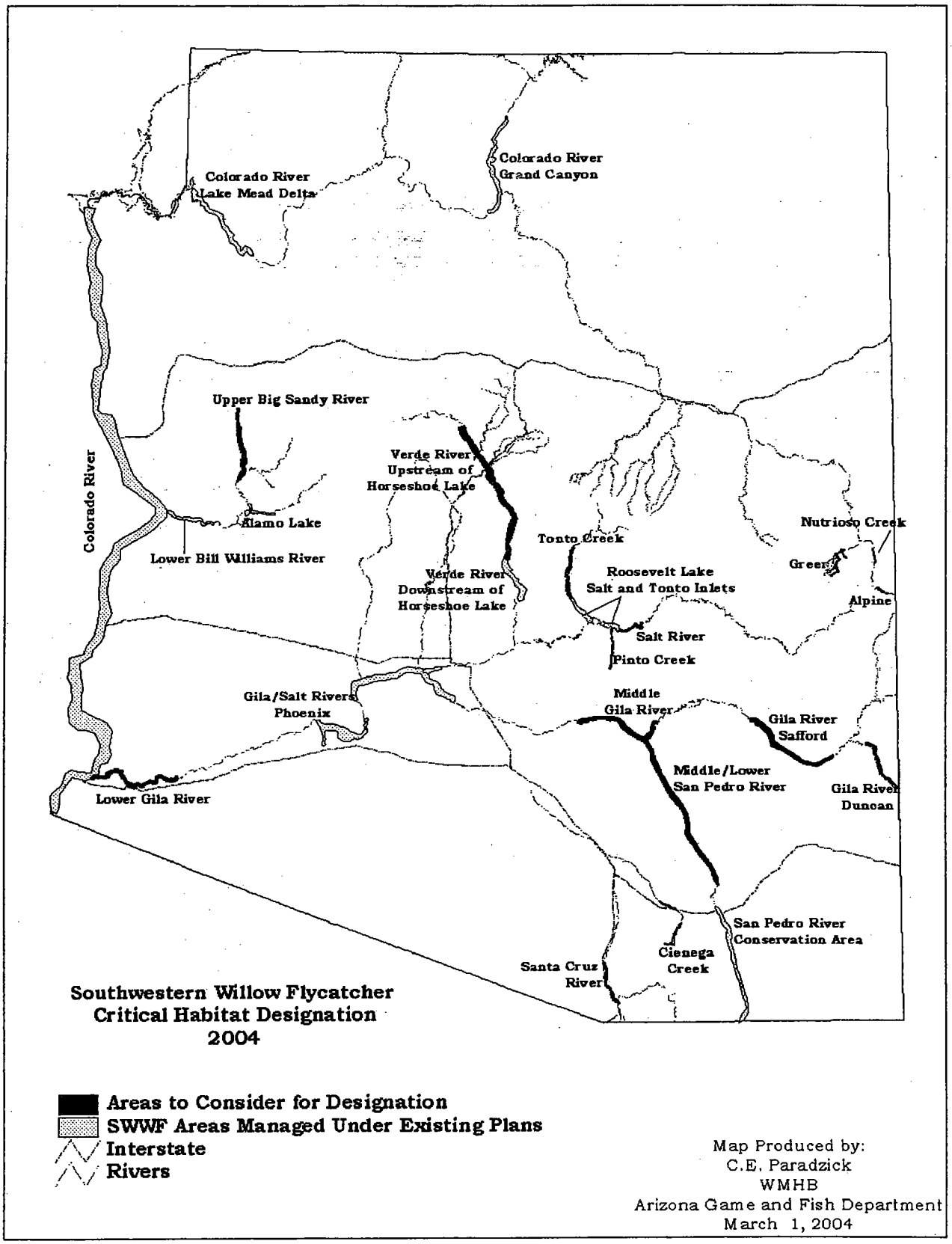
- To fully elucidate potential impacts, areas of critical habitat must first be identified, and quantitative data used in the evaluation. Also, the designation rule must clearly state if and how the associated activities could be affected.
- As the Service works through development of different alternatives, the Department can provide (if available) site-specific information regarding creel data (angler use days) for particular waters or stream reaches.
- Enclosed with these comments are three sources of information related to the economic benefit derived from fishing, hunting, and non-consumptive wildlife-related recreation in Arizona:
    - Southwick Associates. 2003. Economic impact analysis of non-comsumptive wildlife-related recreation in Arizona. Conducted for the Arizona Game and Fish Department.
    - U.S. Department of Interior, Fish and Wildlife Service and U.S. Department of Commerce, U.S. Census Bureau. 2001. National survey of fishing, hunting, and wildlife-associated recreation - Arizona.
    - Silberman, J. 2001. The economic importance of fishing and hunting: economic data on fishing and hunting for the state of Arizona and for each Arizona county. Prepared for the Arizona Game and Fish Department. Arizona State University West.

Literature Cited (if not provided above)

Governor's Riparian Habitat Task Force. 1990. Final report and recommendations: Executive Order 89-16 Streams and Riparian Resources Arizona, Phoenix, Arizona.

Krueper, D. J. 1996. Effects of livestock management on southwestern riparian ecosystems. Pages 281-301 in D.W. Shaw and D.M. Finch, technical coordinators. Desired future conditions for southwestern riparian ecosystems: bringing interests and concerns together. General Technical report RM-GTR-272. U.S. Forest Service, Fort Collins, Colorado.

Stromberg, J.C. 1993. Fremont cottonwood-Goodding willow riparian forests: a review of their ecology, threats, and recovery potential. Journal of the Arizona-Nevada Academy of Science 26: 97-110.


Colorado River
Lake Mead Delta
Colorado River
Grand Canyon
Upper Big Sandy River
Colorado River
Verde River
Upstream of
Horseshoe Lake
Alamo Lake
Lower Bill Williams River
Verde River
Downstream of
Horseshoe Lake
Tonto Creek
Roosevelt Lake
Salt and Tonto Inlets
Salt River
Pinto Creek
Nutrioso Creek
Alpine
Gila/Salt Rivers
Phoenix
Middle
Gila River
Gila River
Safford
Middle/Lower
San Pedro River
Gila River
Duncan
Lower Gila River
San Pedro River
Conservation Area
Cienega
Creek
Santa Cruz
River
Southwestern Willow Flycatcher
Critical Habitat Designation
2004
Areas to Consider for Designation
SWWF Areas Managed Under Existing Plans
Interstate
Rivers
Map Produced by:
C.E. Paradzick
WMHB
Arizona Game and Fish Department
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